

Fishing Amidst the Glocal Flow: How Okinawa's New Generation Sustains the Wisdom of Uminchu¹

Hiroshi Aoyagi

1. Introduction

The current ethnographic synopsis examines the role indigenous knowledge plays in sustainable development. I focus on a local Okinawan family, the members of which utilize old wisdom as a way of dealing with an increasingly-globalizing lifeworld. The wisdom in question generates from an 86 year-old grandfather, Zen'ei Nakamura, who is known to his families as "Grandpa Zen'ei" (*Zen'ei ojii*). Older, experienced fishermen in Okinawa are referred to respectfully as *uminchû* or "natives of the sea," and Grandpa Zen'ei is one of them. He has been practicing a traditional way of fishing known as "roundup fishing" (*oikomiryô*) since he was 12.²

William Clark and his group of researchers on science and technology for sustainable development acknowledge a gap between the advocates of science and technology who play a key role in the development of global order on the one hand, and the residents of local communities on the other. Clark and others contend that one of the main themes of sustainable development is to bridge the gap that persists between what the society of science and technology thinks it has to offer and what the locals actually demand. Increasing the demand for scientific and technological progress in any particular locale will require increasing public awareness of the nature and magnitude of the challenges posed by transitions to sustainability (*Clark et al.* 2002: 5).

Among the tasks proposed by Clark and others for satisfying such a requirement are: implementing priorities in such a way that science and technology can contribute to the resolution of urgent socioeconomic problems as defined by local residents; establishing an enterprise committed to empowering all members of society to make informed choices, rather

1 Shigeo Nakamura and his family provided me with unconditional support toward making the present research possible. Azusa Arakawa also played a crucial role in organizing the current synopsis. I am grateful for their assistances.

2 This specific group of fishermen to which Grandpa Zen'ei belongs is known as *agiyaa*, which has its origin in Itoman, the southern area of Okinawa's main island. A recently published autobiography reveals Grandpa Zen'ei's relationship with this group of local fishermen (see Nakamura 2003).

than providing its services only to states, business corporations, and related power-holders; heightening the sensitivity to local ecosystems (i. e., the complex, dynamic interactions between nature and society as manifested in a specific area); reaching beyond the essential bodies of scholarship to include endogenously generated knowledge, customs and practices; and implementing a decision-making mechanism that is sufficiently democratic and respectful in its choice of issues to address, expertise to consider, and participants to engage (2002: 6). In essence, sustainability for Clark and his research colleagues is the capacity to amalgamate modern science and technology with indigenous knowledge in order to foster a transition toward development paths that meet human needs while preserving the earth's life support systems (cf. Murdoch and Clark 1994; Petersen and Poppel 1999).

The current study builds on this paradigm and examines cultural attitudes of local Okinawans toward their lives that are becoming incorporated into the global socioeconomic order. I highlight how Grandpa Zen'ei's earnest practice of roundup fishing signifies an attitude that aims to reconcile, without the loss of identity, individuals to the ever-glocalizing lifeworld. My intention is not only to demonstrate the significance of Grandpa Zen'ei's practice itself, but also to expose partial yet joyful efforts made by the younger members of the family to meaningfully preserve his way of life as a provider of the know-how for their adaptations to an ever-changing environment. Grandpa's wisdom operates as an effective building block in the formation of family ties and communal solidarity that cannot be easily eroded by what these locals perceive as the alienating forces of globalization. Activities generated by the Grandpa's offspring, especially his second son who acts as a protector of local ecosystem, are aimed at utilizing science and technology for a greater understanding of the natural environment that will allow the locals to take a stronger hold of their autonomy against external influences.

To be sure, my undertaking is an outsider's trek into a village situated in the northern part of Okinawa's main island. The data presented here is based on fieldwork conducted in a series of short-term visits to the area over the last three years. My interactions with the local villagers went beyond one household, and the sufficient representation of ethnographic data is desired. I will nevertheless limit my scope to what Grandpa Zen'ei and his families offered, given the ethical sensitivity of this case study toward delicate positions that other villagers hold in the area.

2. The Backdrop: Practicing Roundup Fishing in an Okinawan Village

Grandpa Zen'ei and his wife, Grandma Yaeko, live in a house that stands next to the house of his second son, Shigeo, his wife, Shizuko, and their five children who are in their twenties. Grandpa has 3 sons, 7 daughters and 30 grandchildren that make up his kin-group or *monchû*.

The current family size is the average for extended families in Okinawa. Grandpa's household, the Nakamura's, is one of approximately 400 households that make up the fishermen's village called Kenken, located at the northern part of Okinawa's main island called Motobu (see maps 1 and 2).

Once a commonly practiced form of fishing throughout Okinawa, roundup fishing requires teamwork of four to twelve fishermen. It involves setting up a net in a part of the sea known as the "passage of fish," which is a sandy opening between coral reefs, swimming away from the net, and rounding up fish in the process of swimming back toward the net. Each fisherman takes a long stick in his hand, and bangs the surface of the water with it or swings it under the water to chase fish out of their hideouts and lead them into the net. Until the early 1970s, Grandpa Zen'ei was one of two-dozen fishermen in Kenken who teamed up to practice this form of fishing. Yet, the construction of a grand theme park in Motobu Ward, along with substantial decrease in the number of fish in the area and the tendency of local fishing market to import inexpensive fish from abroad for consumption, led Grandpa's colleagues to give up roundup fishing as a way of making their living. Grandpa Zen'ei is now the only one who, encouraged by the economic support of his grown-up children, continues to practice the traditional *uminchû* lifestyle.

Should the weather allow, Grandpa Zen'ei goes out into the sea alone on his small boat everyday starting around 8:00 a. m. to around 4:00 p. m. Once out in the ocean, he looks for a passage of fish, which he could identify from years of experience in the sea, and exercises the roundup. He covers three to five passages per day, bringing back on average 20 kilograms of fish (see figures 1-10). Some of his neighbors wait for his return at the port and purchase part of his day's catch as he returns. Each pays 500 yen for approximately 1 kilo of fish. The rest are taken to the local market and sold for anywhere between 7, 000 and 10, 000 yen. "The price gets cheaper and cheaper," he told me with an anxious look on his face, "because of those inexpensive imports." Grandpa's anxiety toward the alienating forces of commercialism does not end here: he is aware of the substantial decrease in the number of fishes in the area for which the trawling industry may be largely responsible. Although these changes in the conditions of living appear to discourage Grandpa Zen'ei to some extent, they do not prevent him from going back into the sea and repeat what he has been doing for more than 70 years of his life. He explained that his small-scale, eco-friendly fishing method was the only thing he could do and enjoy doing – however the world around him is forced to change through scientific and technological developments.

3. Implications of the Global Era

Most of the residents in Kenken would agree with Grandpa Zen'ei's idea that the development of a large theme park, known as Ocean Expo, in 1975 decisively altered the lifeway of *uminchû* in the area. Endowed with the picturesque views of Sesoko-, Nakanose-, Minna- and Ie-Islands off of its coast, and coral reefs that spread under its blue sea-water, Motobu became an ideal construction site for Ocean Expo. The area that stretches approximately 2.8 kilometers long and on average 300 meters wide along the Motobu coast was cultivated into a fancy aquapolis that was composed of three major zones, Aqua Center, Aqua Farm, and Sea Exhibitions (see map 3). Aqua Center classified the ocean ecosystem of the Asia-Pacific region into economically productive sectors, while Aqua Farm displayed how particular areas of a coast could be colonized into fish farms and recreational parks. In Sea Exhibitions, three international organizations, 36 nations, and multiple domestic corporations demonstrated their ocean bio-tech projects as well as their industrial achievements. All of these pavilions attracted thousands of tourists in and outside of Okinawa, enhancing opportunities for other parks and tourist resorts to be developed subsequently. Although the space here is too limited to go into greater details, it can be pointed out that the Expo emphasized a stance that civilized human beings could tame and maneuver ocean ecosystem by means of science and technology (e.g., Tada 2002).

The making of such a theme park yielded labor forces to which many fishermen in Kenken – especially those who were young and healthy – responded. It provided these fishermen-turned construction workers with payments that were much higher than what they earned from fishing. What was originally thought to be a momentary attraction of local fishermen toward industrial economy turned out to be numerous cases of fishermen abandoning fishing altogether. Some intending to take advantage of the development in the area sold their seaside farmlands to estate agents for a greater profit, forcing themselves to leave Kenken in search for urbanized lifestyles. As for Grandpa Zen'ei, he could never since then organize a group that was large enough to practice roundup fishing efficiently.

The decline of the traditional *uminchû* lifestyle in Kenken is part of a larger problem, the industrialization of Okinawa's main island in response to the so-called restoration of Okinawa from the United States to Japan in 1972. Having been recognized as Japan's 47th prefecture after 27 years of U.S. military occupation, Okinawa incorporated itself to Japan's rapid economic development or *kôdo keizaiseichô*. Corresponding in particular to the proposition made by Prime Minister Kakuei Tanaka and his cabinet to develop Japan's rural areas as well as to build transportation and telecommunication network throughout Japan, Okinawa's statesmen under the guidance of Japan's Ministry of International Trade and Industry exercised a series of

campaigns in the 1970s and into the 1980s that directed the local population toward transitional economy. These campaigns aimed at reframing Okinawa's natural and human resources with respect to the idea of industrial development, and they facilitated wage labor that catered to commercial tourism, which encompassed the construction of theme parks, hotels, and souvenir outlets alongside supermarkets. This is not to mention the development of Highway 58, a national road that connected the northern part of Okinawa's main island where Ocean Expo site was being developed with its southern counterpart in which Okinawa's largest city, prefectural capitol and gateway, Naha, stood. Ocean Expo crowned these campaigns as it simulated Okinawa's politico-economic conjunction with the rest of the developed world within a global community.

According to Grandpa Zen'ei and his son Shigeo, what appeared to be an eco-friendly park that consisted of aquatic displays and dolphin shows really exposed local fishermen to tourist-oriented commerce, leading these fishermen to irreversibly give up their heritage and leave the community. An increasing number of ocean resorts as well as the subsequent influx of high-tech products for children such as computer games and cellular phones are other, more recent signs of globalization that pose threats to the communal lifeworld of Kenken's residents. As Shizuko explained to me in an interview:

I am scared when I imagine what effect computer games and cellular phones have on children in our neighborhood. I see more and more of these children spending hours enmeshing themselves in these highly technical machines, and I feel that in doing so they are losing their sense of how to live and communicate with other, actual people in our village. Computer games often encourage competition, if not violence, while cellular phones encourage individualism. These things make them less and less appreciable of the importance of community life itself. These things are quite apparently destroying communal, even family, ties.

This demonstrates a view that industrialization as symbolized by the influx of high-tech products into community life prevents the healthy growth of children in the community since the engagement of these children with those products implants in them a sense of self-centeredness, rather than solidarity, and antagonism, rather than mutual support. Thus, globalization as manifested in the inflow of technology into the local lifeworld is considered to erode the peaceful coexistence of people in the area.

4. The Gloco-Symbolic Role of Grandpa Zen'ei

The fact that a healthy, long-lived fisherman maintains the traditional way of life provides the concerned members of the Nakamura's with a source of empowerment against this

backdrop. Shigeo uses Grandpa Zen'ei and his practice of roundup fishing as a window into realizing the importance of one's harmony with nature—which for him refers to the peaceful coexistence of all living beings within the local ecosystem. As he told me that Grandpa Zen'ei is a private person but also is a representative of Kenken's *uminchū* community, I asked him whether Grandpa has any lessons to offer the world. Shigeo replied:

It is a lesson to realize the importance of having the sense that all living beings must coexist within the local environment—however different they may be in their species, appearances, conditions of living, or approaches to life. It is also a lesson to realize the importance of keeping oneself in touch with nature and one's pace with nature in a specific locale. For humans, this means that we must learn about the balance of life in our local ecosystem and realize how to live in this ecosystem—just like Grandpa who has, over the years of his life, acquired the senses of where to go to do what he does, and how much to take or not to take.

Thus, Shigeo signifies Grandpa Zen'ei's lifeway as a way of reconciling oneself with the ecosystem in which one is positioned. All living beings are part of the local ecosystem and nothing is healthier than living in harmony with this ecosystem.

As a practitioner of applied science and technology, Shigeo works as a superintendent at an ocean biology research laboratory that stands in a small island off of Kenken's shore called Sesoko. He manages laboratory facilities, and conducts his own ecological research on native Okinawan fish that are dying out due to the influx of foreign species. The laboratory is a place where ocean biologists come from various parts of the world to conduct research that will contribute to the improvement of fish stock, and therefore to the effective fish farming. For Shigeo, his work at the laboratory offers scientific and technological means to better understand the local ecosystem and initiate on the basis of such understanding activities that could benefit the local community in ways that are otherwise impossible. As he explained to me one day when he took me on a tour of the laboratory:

By utilizing technological apparatuses, one can analyze scientifically how lives rely on each other, and what harm the industrially-oriented operations do to the delicate balance of nature in this area. Then, one can appreciate how important it is to maintain the traditional way of fishing—the locally-evolved wisdom of keeping harmony with living creatures in the sea, and by extension harmonious coexistence and cooperation between the members of the [Kenken] community.

In this way, Shigeo identifies his ecological undertaking as configuring an aspect of science and technology that contributes to the sustainable development of community lifeworld in Kenken.

Building on this perspective, Shigeo called upon senior fishermen (aged between 50 and 65) in Kenken and organized the so-called “Roundup Fishing Experience Day.” Since 1989, this has

been an annual event in which Grandpa Zen'ei, Shigeo and several other fishermen of Kenken take local children and young adults out into the sea on a boat to experience roundup fishing, bring back their catch, and cook with the assistance of their mothers. The event has become a cornerstone in the construction of a local administrative body that promotes the healthy growth of children in Kenken. The event is received well in the community, and it is considered a form of edutainment for those who participate—children, young adults, and adults alike.

Shigeo's sons and daughters are proud of their *uminchu* heritage, and their intentions to stay in Kenken throughout their lives are apparent effects of the eco-oriented socialization. Shigeo's second son, Shigeki, had recently acquired a position in the local aquarium called Churaumi Suizokkan (lit. Aquarium of the Beautiful Sea) that emerged out of the Ocean Expo mentioned earlier. Shigeki's job is to administer the aquarium's facilities, and take part in demonstrating the significance of natural life in the area to many visitors from elsewhere. I wondered if the fact that the next generation of the Nakamura Family partook of an occupation offered by an institute that previously signified a threat to the local community appeared ironical in the eyes of Shigeo. When I asked him this, Shigeo replied with a smile on his face that this was rather a triumphant moment for him. It represented a great leap forward in which locals took the initiative of a despotic organ that was set up by and for people outside of the Kenken community. In Shigeo's view, this, along with his own ecological undertaking, contributed to the social construction of glocal management in which locals hold the leadership. It signified the transition of Ocean Expo from politico-economic to ecological orientation.

5. Summary

The aim of current synopsis has been to demonstrate through a concrete ethnographic case study of a local fisherman and his family the significance of amalgamating indigenous knowledge with modern science and technology in order to foster a transition toward sustainable development. As shown, Grandpa Zen'ei's practice of roundup fishing provides the locals of Kenken with the wisdom of living in harmony with their immediate environment, which in scientific and technological terms is to exercise living with heightened sensitivities to the local ecosystem. Shigeo and his son's efforts to sustain the local wisdom as symbolized in the lifeway of Grandpa Zen'ei resulted in a clever integration of the old way with the powers of modernity. Their practices show that enterprises such as the ocean theme park and ocean biology laboratory, which were originally built locally but by and for scientists, technocrats, and business corporations, could turn into institutes that may eventually contribute to the resolution of urgent sustainability problems as defined by local residents.

The ethnographic data presented above points to the understanding that globalization and its

constituent developments such as industrialization continue to pose threats on local communities. Yet, these data also point out that scientific knowledge, which functions as proponents of globalization, could also contribute to the empowerment of local community as long as locals could fully participate in their operations with their agendas in mind.

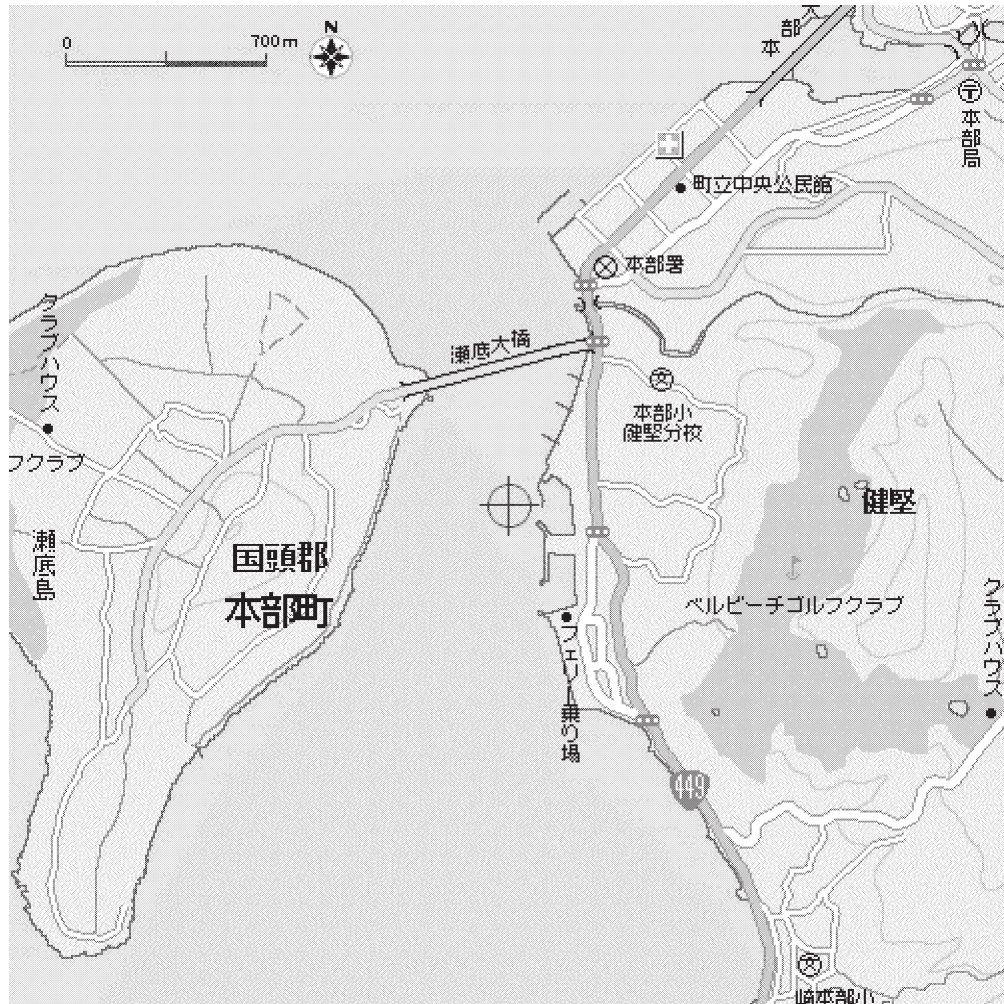
6. Maps and Figures

Note: Map 1 is taken from MAGELLAN Geographics (1996). Maps 2 and 3 are taken from CyberMap Japan (2004). Figures are taken by the author (August 2002).

Map 1. Okinawa's main island (Kenken is located on the west side of the northern peninsula).



Map 2. A close-up of Kenken (right side of the bridge), facing Sesoko Island (left side of the bridge).



Map 3. A close-up of Ocean Expo Park area, located to the north of Kenken in Motobu Ward.



Figure 1. Grandpa Zen'ei leaving his house (around 8:00am).



Figure 2. Grandpa loads his boat with his fishing gears (nets and iceboxes).



Figure 3a, b. Once the boat is loaded, grandpa sails out into the sea.



Figure 4a, b. Grandpa looks into the water for fish as he reaches his fishing spot.



Figure 5a, b. Grandpa jumps into the water and swims away from the boat. He sets up his net in the water using his toes.



Figure 6. Grandpa bangs his stick on the surface of the water, guiding fish into the net.



Figure 7. Back in the boat, grandpa pulls up his fish net.



Figure 8a, b. Back home, grandpa and his assistant from a local union observe their day's catch.



Figure 9. Fish caught this day included parrotfish, tusk fish, sole, coral trout, cod, and sea eel.



Figure 10. Grandpa fixes parts of his net that had been ripped by fish.



References Cited

- Clark, William, Buzier, James, Cash, David, Corell, Robert, Dickson, Nancy, Dowdeswell, Elizabeth, Doyle, Helen, Gallopin, Gilberto, Glaser, Gisbert, Goldfarb, Leah, Gupta, Anil, Hall, Michael, Hassan, Mohamed, Imevbore, Anthony, Iwu, Maurice, Jager, Jill, Juma, Calestous, Kates, Robert, Krömer, Dörthe, Kurushima, Morihiro, Lebel, Louis, Lee, Yee Cheong, Lucht, Wolfgang, Mabogunje, Akin, Malpede, Diego, Matson, Pamela, Moldan, Bedrich, Montenegro, Gloria, Nakicenovic, Nebojsa, Ooi, Ling, O'Riordan, Timothy, Dorsamy, Pillay, Rosswell, Thomas, Sarukhán, Jose, Wakhungu, Judi (2002). *Science and Technology for Sustainable Development*. Consensus Report of the Mexico City Synthesis Workshop, May 20-23.
- Murdoch, Jonathan and Clark, Judy (1994). *Sustainable Knowledge*. Newcastle Upon Tyne: Centre for Rural Economy.
- Nakamura Zen'ei (2003). *Okinawa Uminchû: Hitori Oikomiryô Ni Ikiru (The Story of an Okinawa Fisherman: Practicing Roundup Fishing Alone in the Sea)*. Tokyo: Kawade Shobô.
- Petersen, Hanne, and Poppel, Birger (eds.) (1999). *Dependency, Autonomy, Sustainability in the Arctic*. Aldershot: Ashgate.
- Tada, Osamu (2002). *Okinawa Imeeji No Tanjô: Okinawa Kaiyôhaku To Kankô Rizootoka No Purosesu (The Birth of Okinawan Image: Okinawa Ocean Expo and the Process of Tourist Resort Development)*. Unpublished manuscript (doctoral dissertation). Tokyo: Waseda University.